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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,979	11/06/2001	Joel K. Hammond	1263-2 (156198)	7592

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EXAMINER

LU, KUEN S

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,979

Applicant(s)

HAMMOND, JOEL K.

Examiner

Kuen S Lu

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/11-6-01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-3, 8-9, 11, 13-17, 22-23, 25, 27-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Shultz (U.S. Patent 5,640,553) and in view of Chang et al. (U.S. Pub. 2002/0052871 A1, hereafter "Chang").

As per Claims 1 and 13, Shultz teaches the following:

"prompting a user to enter a query" at Fig. 2, element 202 and col. 9, lines 31-32 by entering user's query;

"identifying key terms contained in the query" at Fig. 6B, element 142b and col. 23, lines 25-26 by determining the terms of the query entry string;

"creating an expanded query to include additional terms predetermined to be related to the key terms in the query" at Fig. 6B, element 142e and col. 23, lines 46-52 by expanding query terms by adding semantic information terms;

"identifying information that includes at least one of the terms in the expanded query" at Fig. 6B, element 142f and col. 23, lines 52-55 by only adding the expansion words from the semantic network which are the same part of speech;

"prompting the user to select at least one item of information identified as including at least one of the terms in the expanded query" at Fig. 2, elements 202-206 and col. 9, lines 50-53 by user to use some or all of any retrieved file to compose a document directed to the search query;

"accessing an electronic file that contains the information selected by the user" at Fig. 6B, element 142j and col. 24, lines 19-21 by listing the result of the search output; and

"providing access to a computer network associated with a plurality of electronic files containing information" at Fig. 3 by showing the network (element 108) and documents (incoming document – element 112 and document index database –element 117);

Shultz does not specifically teach "a metadata database comprising identifying data for selectively accessing the electronic files".

However, Chang teaches document retrieval according to metadata of documents at Fig. 3, elements s302-s308 and Page 2, [0057].

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Chang's teaching with Shultz' by implementing metadata database of documents in Shultz' system. Both references are directed to document retrieval. Further, the combined reference would have allowed Shultz' users be able to retrieve documents by using metadata database of the documents as suggested by Chang at Fig. 3, elements s302-s308 and Page 2, [0057].

As per claims 2 and 16, Shultz teaches the following:

“providing a vocabulary bridge having electronic files including groups of terms for expanding a query entered by the user” at Fig. 2, elements 202-206 and col. 9, lines 50-53 by user to use some or all of any retrieved file to compose a document directed to the search query;

“comparing key terms entered by the user as part of the query to the electronic files” at Fig. 6B, elements 142f, 142d, 142e and 142j, col. 23, lines 34-45 by comparing the key terms of query and performing the query against the electronic files; and

“adding to the query all terms in at least one group that contains at least one of the key terms to provide an expanded query containing both entered terms and un-entered terms” at Fig. 6B, element 142e and Fig. 2, element 206 by adding expansion word and some or all of a retrieved file for performing the query.

As per claims 3 and 17, Shultz teaches “electronic files include dictionaries, thesauri, and authority files” at Fig. 2, element 208 and col. 9, lines 15-18 where the document database is library database for storing text, image, audio or other multi-media information representative of files provided by a plurality of publishers.

As per claims 8 and 22, Shultz teaches “wherein the query is expanded to include at least one term associated with at least one term contained in the query” at Fig. 6B, element 142e and Fig. 2, element 206 by adding expansion word and some or all of a retrieved file for performing the query.

As per claims 9 and 23, Shultz teaches "wherein the plurality of electronic files are all related to a pre-selected subject" at col. 32, lines 54-64 by storing documents in a particular subject database based on their discriminator weights.

As per claims 11 and 25, Shultz teaches "the additional step of assigning identifying information to the user to enable the user to subsequently access and manipulate the query and the selected information" at Fig. 4, steps 335, 340 and 350 by session manager to get result, perform intersection and transmit to use for user to select document.

As per claims 14 and 15, Shultz teaches the plurality of electronic files include "audio" and "video" elements capable of being transmitted over a computer network at Fig. 1, element 108 and col. 4, lines 26-33 and col. 8, lines 60-63 by searching video and audio records of multi-media files under a network architecture.

As per claim 27, Shultz teaches the following:

"an electronically accessible computer network including at least one server for providing access to information available through the computer network" at Fig. 1, elements 102, 108 and 110 where users and servers including session, query and database servers are accessible through computer network;

"the computer network being associated with a plurality of electronic files containing information" at Fig. 1, elements 118 and 112 where database containing a plurality of electronic files; and

"vocabulary bridge for expanding a query entered by a user" at Fig. 2, elements 202-206 and col. 9, lines 50-53 by user to use some or all of any retrieved file to compose a document directed to the search query.

Shultz does not teach "a metadata database for accessing the electronic files".

However, Chang teaches document retrieval according to metadata of documents at Fig. 3, elements s302-s308 and Page 2, [0057].

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Chang's teaching with Shultz' by implementing metadata database of documents in Shultz' system because both references are directed to document retrieval and the combined reference would have separated information about documents from the documents data such that documents insertion, retrieval or removal would have been structured and the performance of the system would have been improved.

As per claim 28, Shultz teaches the following:

"providing a vocabulary bridge having electronic files including groups of terms for expanding a query entered by the user" at least one of the terms in the expanded query" at Fig. 2, elements 202-206 and col. 9, lines 50-53 by user to use some or all of any retrieved file to compose a document directed to the search query;

"comparing key terms entered by the user as part of the query to the electronic files" at Fig. 6B, elements 142f, 142d, 142e and 142j, col. 23, lines 34-45 by comparing the key terms of query and performing the query against the electronic files; and

"adding to the query all terms in at least one group that contains at least one of the key terms to provide an expanded query containing both entered terms and un-entered terms" at Fig. 6B, element 142e and Fig. 2, element 206 by adding expansion word and some or all of a retrieved file for performing the query.

As per claim 29, Shultz teaches "electronic files include dictionaries, thesauri, and authority files" at Fig. 2, element 208 and col. 9, lines 15-18 where the document database is library database for storing text, image, audio or other multi-media information representative of files provided by a plurality of publishers.

As per claim 30, Shultz teaches "wherein the authority files include groups of related terms for expanding a query entered by a user to include un-entered terms relevant to entered terms" at Fig. 2, elements 202-206 and col. 9, lines 50-53 by user to use some or all of any retrieved file to compose a document directed to the search query;

As per claim 32, Shultz teaches "wherein the computer network is accessed using a personal computer" at Fig. 1, elements 102, 108 and 110 where users and servers including session, query and database servers are accessible through computer network.

2. Claims 4, 7, 12, 18, 21, 26 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Shultz (U.S. Patent 5,640,553), in view of Chang et al. (U.S. Pub. 2002/0052871 A1, hereafter "Chang") as applied to Claims 1-3, 8-9, 11, 13-17, 22-23, 25, 27-30 and 32, and further in view of Fries et al. (U.S. Patent 6,393,415, hereafter "Fries").

As per claims 4, 18, and 31, the combined reference of Shultz and Chang teaches query and expanded terms.

The combined reference does not specifically teach "all of the terms contained within each individual group of terms are pre-determined to be related to each other".

However, Fries teaches Natural Language Parse grouping multiple words that represent a single conceptual term at col. 10, lines 7-10.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Fries and Chang's teaching with Shultz' by further clarifying the query text and using NPL to modify the search query because by doing so the ambiguity of search query would have been minimized and the optimization of query would have been improved.

As per claims 7 and 21, Fries further teaches "the query is expanded to include at least one linguistic translation of at least one term contained in the query" at Fig. 9, elements 454-466 and col. 11, lines 42-48 by using NLP to convert keywords into possible search topics.

As per claims 12 and 26, Fries further teaches "additional step of displaying to the user a synopsis of information identified as including at least one of the terms in the expanded query" at Fig. 8, steps 330, 332, 334, 338, 340 and 342, and col. 19, lines 31-45 by displaying the expanded query to user for further modification.

3. Claims 5-6, 10, 19-20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Shultz (U.S. Patent 5,640,553), in view of Chang et al. (U.S. Pub. 2002/0052871 A1, hereafter "Chang") as applied to Claims 1-3, 8-9, 11, 13-17, 22-23, 25, 27-30 and 32, and further in view of Macke et al. (U.S. Patent 6,249,784, hereafter "Macke").

As per claims 5 and 19, the combined reference of Shultz and Chang teaches query system and query terms expansion.

The combined reference does not specifically teach "wherein the query is expanded to include a biological sequence of at least one term contained in the query".

However, Macke teaches operating and searching named and annotated string databases for biological sequence.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Macke and Chang's teaching with Shultz' by including biological database into Shultz' system because the references are all directed to named string search and the combination of teachings would have made the operation of biological sequence database more efficient and meaningful.

As per claims 6 and 20, Macke further teaches "wherein the query is expanded to include an identifier identifying a biological sequence of at least one term contained in the query" at Fig. 9, elements 92 and 95.

As per claims 10 and 24, Macke further teaches "wherein the pre-selected subject is biology" at the Abstract.

Conclusions

4. The prior art made of record
 - A. U.S. Patent 5,640,553
 - B. U.S. Publication 2002/0052871 A1
 - C. U.S. Patent 6,460,029
 - D. U.S. Patent 6,249,784

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- E. U.S. Patent 5,873,076
 - F. U.S. Patent 6,393,415 B1


G. U.S. Patent 6,523,022 B1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 703-305-4894. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

KL

Patent Examiner

March 5, 2004


JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100